

BLACK WALNUT



25-YEAR-OLD BLACK WALNUT PLANTATION

MARYLAND STATE BOARD OF FORESTRY

BALTIMORE, MARYLAND



BLACK WALNUT.

(*Juglans nigra*)

The black walnut produces the most highly prized wood of any native tree of Maryland. It is a moderately rapid grower on good soil, easily propagated, and because of the active demand for walnut timber, and for the nuts produced it is one of the most desirable species for forest planting. Black walnut does not grow naturally in pure stands. It is generally found growing either as individuals, or in mixture with other hardwoods on deep, fertile, moist soils, especially in the valleys and bottom lands along streams.

Range.

This tree is found generally distributed throughout the State as individual specimens, or small groups,—never in pure stands. It is more abundant in the midland section and the upper Coastal Plain, less frequent in the mountain section and in the lower Coastal Plain. The frequent occurrence of walnut along fence rows, at the lower end of gulleys along stream banks, or in open pastures, is to be accounted for by such natural means as neglected squirrel caches, or the carrying of the seed by high water from some point farther up stream.

Characteristics.

When forest grown, the trunk is straight and tall, being clear of limbs for over half of its height, with a rounded crown. In the open the trunk usually divides at 10 to 15 feet above the ground, into several large main branches, forming a wide-spreading crown. The leaves are compound, alternate, and from 18 to 24 inches long, and composed of from 15 to 23 leaflets. The bark on young trees is at first light brown and somewhat scaly, but soon becomes thick, dark brown to black, and divided by rather deep fissures

into rounded ridges. The fruit is a nut enclosed in a solid green husk, which does not split open even after the nut ripens and falls to the ground in September. The nut itself is black, with a heavy, hard, thick, finely ridged shell, enclosing a rich, oily kernel, edible and highly nutritious. The black walnut makes rapid growth on rich bottom lands, but the tree must obtain large size before much of the valuable heart wood is formed. Throughout its life the tree requires an abundance of light to develop properly.

Soil And Moisture.

The best growth of the black walnut is obtained on deep, rich, loamy bottomlands that are moist but well drained. On such soils the growth of walnut compares favorably with white ash, and other moderately fast growing species. Such soils, however, are generally the best for agricultural purposes and so used, although exception should be made in the case of bottom lands, subject to overflow. Such areas are admirably suited for growing walnut, but unsuited for field crops.

Enemies.

While fungi attacking the fruit of the black walnut are rather common, causing it to shrivel up and drop prematurely, the wood and growing portions of the tree itself are comparatively free from fungous injury. The caterpillars of the walnut sphinx moth often defoliate a tree in a very short time. But such attacks are local and sporadic and can easily be controlled by arsenical sprays, so they do not act as a deterrent to the propagation and growth of the species.

Uses Of The Wood.

Walnut wood is so valuable that it is largely cut into veneer for the manufacture of furniture. When buying walnut veneer logs the usual practice is to take the stump and portion of the roots as well—the grain in this portion of the tree being especially desirable for veneering.

Sawn planks from smaller dimensioned trees find a ready sale for gun stocks, and more recently aeroplane propellers.

Suitability For Planting.

Black walnut is an ideal tree for planting in pure stands or as single trees. When planting in mixture, faster growing trees must be avoided, otherwise the walnut will be shaded out and killed. Odd corners around the pasture or along the lane are splendid spots for individual specimens. Nearly every farm in the midland zone of Maryland has spots along ravines or at the base of gullies, where the planting of walnut is good practice in utilizing waste land.

Yield And Return.

There are a few plantations of black walnut in Maryland, but they are comparatively young, and hence, give only a rough idea of the yield of lumber per acre that can normally be expected from the species. These plantations, located in the Piedmont Plateau section, are in excellent shape, and indicate that walnut growing within the State will be very profitable.

The rate of growth depends, principally, upon the soil and location. On average sites adapted to this tree, such as deep, rich, moist bottom lands, the following results, taken from plantations in neighboring states should be obtained:

| AGE | HEIGHT | DIAMETER |
|---------|--------|----------|
| (Years) | (Feet) | (Inches) |
| 40 | 62 | 12.5 |
| 50 | 68 | 15.7 |
| 60 | 72 | 18.3 |
| 70 | 75 | 20.6 |

NOTE:—The State Board of Forestry maintains a forest nursery where trees suitable for forest planting are grown and distributed at cost to landowners of the State. Full particulars may be obtained upon application.